

# 2007 CENSUS OF AGRICULTURE

**2009 On-Farm Energy Production** 

## **Oklahoma State Profile**

**Published February 2011** 

#### **BACKGROUND**

The 2009 On-Farm Renewable Energy Production Survey (OREPS) is a follow-on survey to the 2007 Census of Agriculture. It is the first on-farm renewable energy production survey conducted on the national level by the U.S. Department of Agriculture (USDA), National Agricultural Statistics Service (NASS).

The 2009 OREPS provides information on energy produced by wind turbines, solar panels, and methane digesters that were in operation on farms in 2009. Wind turbines located on farm operations under a wind rights lease agreement are considered commercial and were excluded from this survey. Methane digesters not owned and operated by the farm operation were not included in the survey.

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## PHOTOVOLTAIC (PV) AND THERMAL SOLAR PANELS

Oklahoma ranked 4th in the region for number of farms with solar and thermal panels. There were 7,968 farms using solar panels to generate energy in the United States. The number of farms using solar panels ranged from four farms in Delaware to 1,906 farms in California.

| State         | Number of<br>Farms | PV Solar<br>Panels | Thermal Solar<br>Panels |
|---------------|--------------------|--------------------|-------------------------|
| Arkansas      | 41                 | 37                 | 5                       |
| Colorado      | 504                | 445                | 117                     |
| Kansas        | 116                | 93                 | 36                      |
| Missouri      | 93                 | 84                 | 22                      |
| New Mexico    | 258                | 241                | 38                      |
| Oklahoma      | 187                | 167                | 37                      |
| Texas         | 573                | 541                | 67                      |
|               |                    |                    |                         |
| United States | 7,968              | 7,236              | 1,835                   |

#### **SMALL WIND TURBINES**

Oklahoma ranked 5th in the region for number of farms with small wind turbines. There were 1,406 U.S. operations reporting 1,831 small wind turbines that were owned and operated by farmers and ranchers.

|               |                    |                       | Average p                             | Average per Turbine               |  |  |
|---------------|--------------------|-----------------------|---------------------------------------|-----------------------------------|--|--|
| State         | Number of<br>Farms | Number of<br>Turbines | Rated Generating Capacity (Kilowatts) | Installation<br>Cost<br>(Dollars) |  |  |
| Arkansas      | 7                  | 11                    | 2                                     | 5,800                             |  |  |
| Colorado      | 98                 | 147                   | 3                                     | 4,581                             |  |  |
| Kansas        | 18                 | 20                    | 6                                     | 10,084                            |  |  |
| Missouri      | 21                 | 28                    | 3                                     | 7,779                             |  |  |
| New Mexico    | 28                 | 34                    | 1                                     | 4,807                             |  |  |
| Oklahoma      | 20                 | 22                    | 2                                     | 4,156                             |  |  |
| Texas         | 102                | 148                   | 4                                     | 8,493                             |  |  |
|               |                    |                       |                                       |                                   |  |  |
| United States | 1,406              | 1,831                 | 6                                     | 12,972                            |  |  |

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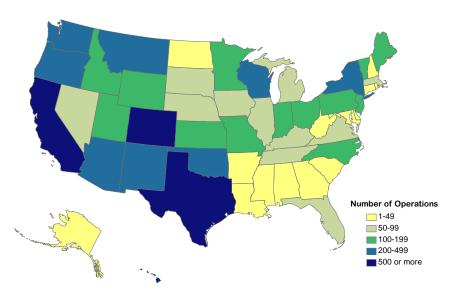
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### ENERGY SAVINGS, ENERGY AUDITS, AND/OR FEDERAL FUNDING

Oklahoma ranked 4th in the region for number of reported farms that used some type of energy source, but ranked 5th in the region for average dollars saved on utility bills.

| State                                | Number of<br>Farms <sup>1</sup> | Average<br>Dollars Saved<br>on 2009<br>Utility Bills<br>per Farm | Performed<br>Energy Audit<br>(Farms) | Received<br>Federal<br>Funding |
|--------------------------------------|---------------------------------|--|--------------------------------------|--------------------------------|
| Arkansas                             | 42                              | \$1,070  | 2                                    | 2                              |
| Colorado                             | 518                             | \$1,415  | 14                                   | 48                             |
| Kansas                               | 125                             | \$689  | -                                    | 11                             |
| Missouri                             | 102                             | \$547  | 3                                    | 12                             |
| New Mexico                           | 260                             | \$2,080  | 1                                    | 35                             |
| Oklahoma                             | 200                             | \$1,037  | 2                                    | 28                             |
| Texas                                | 624                             | \$1,198  | 14                                   | 32                             |
| United States  1 Reporting Wind Turb | 8,569<br>bines, Digesters, and  | \$2,406<br>d/or Solar Panels                                     | 613                                  | 1,101                          |

FARMS PRODUCING RENEWABLE ENERGY: 2009 (UNITED STATES TOTAL = 8,569 FARMS)



"Your operation, large or small, represents Oklahoma agriculture. We appreciate your assistance in providing timely and accurate data. Thank you for your support." ~Wilbert C. Hundl, Jr., Director USDA-NASS Oklahoma Field Office



#### USES OF SURVEY DATA

The production of on-farm renewable energy can provide cost saving alternatives for America's farmers and ranchers. The information gathered will help in the continued development of this expanding agricultural industry.

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Agricultural Statistics Hotline: (800)727-9540

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